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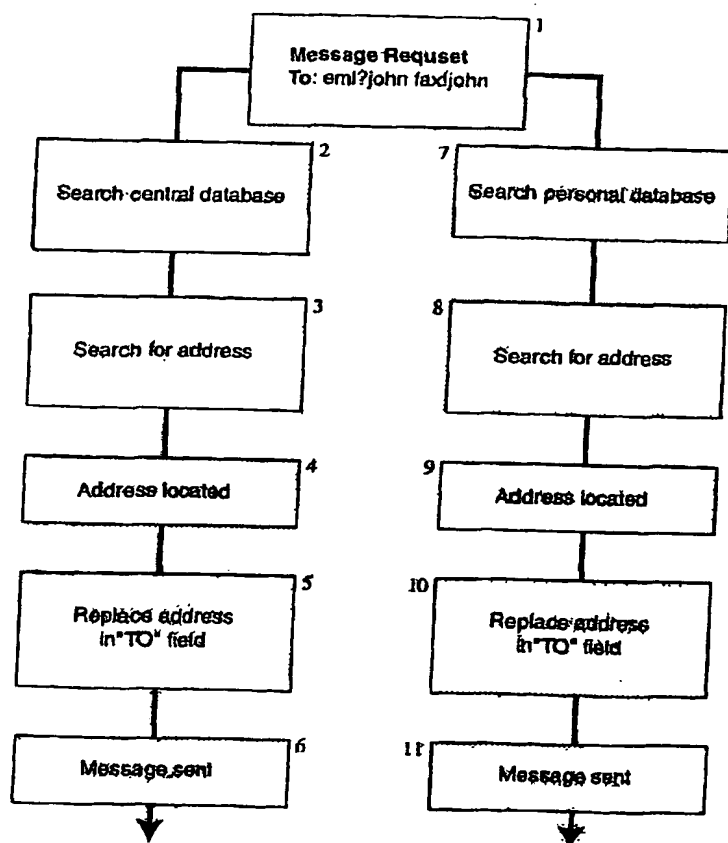
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(54) Title: **UNIFIED ADDRESSING SYSTEM**



(57) Abstract: A method of addressing an electronic message wherein an address of an intended recipient includes: a platform identifier to identify which message platform the electronic message is to be sent to; and a name identifier to identify the name of the recipient.

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UNIFIED ADDRESSING SYSTEM**FIELD OF INVENTION**

The present invention relates to a system or method of addressing for messaging over various electronic messaging platforms. In particular the system provides the user with a simplified method to remember and enter the different addresses that exists for each addressee under different messaging platform.

BACKGROUND OF INVENTION

There exists a multitude of messaging platforms that operate through electronic means. Examples of "traditional" platforms are Telephone (voice), Telex and Fax. Recently introduced platforms include Email, SMS, ICQ, AOL Messenger and MSN Messenger, and many new platforms are being introduced periodically.

Each of these messaging platforms have their own unique addressing system. For example, (country code)+(area code)+(phone number) for telephones, fax and SMS; xxx@yyy.com for emails; a string of numbers for ICQ, etc.

With the large and ever increasing number of messaging platforms that people use, it is becoming more difficult for users to remember all the addresses of a particular person. This has resulted in an increased usage of electronic address books/organisers, internet address books/organisers and other tools to help users store such addresses for easy retrieval. However with these solutions, the user still has to first obtain the other parties' addresses and input it into the device for storage. When the user wants to contact the other party he has to retrieve the address and enter it into the messaging device. This process of obtaining, storing, retrieving and inputting of a message platform address is time-consuming, frustrating, prone to errors and requires effort to keep information current. The inputting of the various platform addresses is especially difficult when using a mobile phone as access to alphabets, numbers and special characters can only be possible with a special sequence of clicks on a 12 button keypad. The situation is worsened by the fact that the sequence is not standard on different mobile phones.

OBJECT OF THE INVENTION

An object of the invention is to provide a system that would enable a user to more easily send messages to a recipient, without needing the user to memorise

each possible address for the recipient. A further object is to provide such a system for a user to be able to send a message from one platform to at least one different platform.

SUMMARY OF INVENTION

5 With the above objects in mind, the present invention provides in one aspect a method of addressing an electronic message wherein an address of an intended recipient includes:

a platform identifier to identify which message platform the electronic message is to be sent to; and

10 a name identifier to identify the name of the recipient.

In a preferred embodiment the address may further include a modifier to separate said platform identifier and said name identifier.

Conveniently the modifier may further determine which database to obtain the newest recipient from.

15 It is envisaged that the platform identifier will ideally be a string of 3 characters.

In a further aspect, the present invention provides a system for sending electronic messages to at least one message platform, said system including an addressing system wherein said addressing system receives and processes
20 recipient addresses, said recipient address including:

a platform identifier to identify which message platform the electronic message is to be sent to; and

a name identifier to identify the name of the recipient.

25 In a preferred embodiment the address may further include a modifier to separate said platform identifier and said name identifier.

BRIEF DESCRIPTION OF THE FIGURES

30 The present invention will be further described with reference to the accompanying drawings. It will be appreciated by the person skilled in the art that other embodiments of the present invention are possible, and therefore the particularity of the accompanying drawings and description is not to be understood as superseding the generality of the preceding description of the invention.

Figure 1 shows how an actual messaging platform address may be constructed from the subject addressing system.

Figure 2 shows an alternative method of accessing the database.

DETAILED DESCRIPTION

5 The mutli-messaging platform addressing system of the present invention, amongst other features, allows a user to:

(1) Easily remember another user's addresses on various platforms without having to refer to any address book. The address of any user on any messaging platform under the present system includes a platform identifier, the addressee's
10 name and a modifier to denote the database used in the system to extract the actual messaging address. That is, the address may take the form:

<platform identifier><modifier><addressee name>.

The identifier may be used to identify the messaging platform for transmitting the message, as well as the address in the addressee record to use. The identifier
15 may be any unique string of text that is recommended to be easily remembered and entered into any device. For example:

Platform	Suggested Identifier
Email	eml
SMS	sms

20 Facsimile fax The modifier may be used to identify a database to be used to retrieve the platform address of the addressee based on the name. The modifier may be used to distinguish between a central or shared database, a personal database, and any other database. For example, the modifiers may be used as follows:

Database	Modifier
central/shared	?
personal	!

The addressee name may be used to identify the name of the record in the appropriate database to use to retrieve the platform address. A person may be listed
30 in another users personal address book under a different name from the central database name.

Accordingly, examples of addresses under the present system for a user name "John" could have his Email, SMS, Fax, Telephone (voice) and ICQ addresses referred to as eml!John, sms!John, fax!John, vox!John and icq!John respectively if using the sender's personal address book and eml?John, sms?John, fax?John, vox?John and icq?John respectively if using the central database.

Of course, the system could be set up such that the address could take the form:

<addressee name><modifier><platform identifier>.

Similarly, the modifier could be any character and not just "!" and "?".

The system may also be implemented without the need for a modifier. In this arrangement the platform identifier would be standardised to a predefined character length, such that the system will be aware that the first (or last) n letters are identifiers and the n+ 1st character onwards is the user name.

Under this method of addressing, the user only has to remember the platform identifiers, which ideally are easily remembered shortforms of the platform names, and the addressee's name, which is common for all the platforms used, and much easier to remember than a sequence of alphabets/numbers/special characters and a modifier to denote which database the system should use to extract the correct address. In this arrangement it is anticipated that each user would be responsible for maintaining and ensuring that their contact details are correct. In this way addresses should always be up to date and correct.

If the addresses are stored on a central database, whilst the user may not have to update an addressee's data, remembering the addressee's name may not be convenient. In these circumstances, the system may allow the user to also maintain a personal address book. The user is then able to use this personal address book when the name of the recipient under the central database is not found to be easy to remember by the sender. In such a case, the sender can enter a more easily remembered alias of the recipient into his personal address book and use the appropriate modifier, "!" in this example, to instruct the system to use his personal address book to extract the correct address without causing a conflict with a possible similar name under the central database. The system may be set up such that the

personal address book is a separate database which the user is required to maintain. Alternatively, the personal address book could contain a series of pointers to the relevant entry in the central database. In a further implementation a private address book alone, that is, without a global address book could be implemented.

- 5 (2) Easily enter the address of any platform on a mobile phone without involving special key-strokes. In most mobile phones, text input is achieved via a 12-key pad, in order to cover all possible alphabets, numbers and special characters, multiple and special keystrokes are required for inputting some characters.

10 The platform identifiers and modifiers chosen are important to the design of the present system as they are part of the design to make remembering and inputting of multiplatform addresses easy. Characters used for identifiers and modifiers should be easily accessible on a mobile phone without any special key-strokes as well as easy to remember. On mobile phones, the text input box when entering an address normally defaults to alphabets which make it easier to input
15 alphabets rather than numbers. Special characters (not alphabet or number) will preferably be included to separate the identifiers from the username to denote where the identifier stops and where the username begins in the address. The said special separators also denote which database the actual user address should be extracted from. On a mobile phone, ".", ",", "?", and "!" are usually the most accessible special
20 characters and should ideally be used as should be alphabets for identifiers and usernames instead of numbers.

- 25 (3) Ideally, the system will also enable a sender to message a user on a platform even when the sender does not have the recipient's address on that platform. As long as the sender has either the name or address of any of the recipient's messaging platforms, the sender will be able to deduce the address for the recipient. For example, if the sender only knows the name of the recipient, then the sender merely has to input the platform identifier and database modifier followed by the recipient's name and the sender will be able to send the message. However if the sender only knows the recipient's email but wanted to send a fax, then the
30 sender would have to take the additional step to search for the addressee's name in the central database based on the email address. Once the addressee name is

found, the sender then inputs the platform identifier for fax and the database modifier for the central database followed by the name. For the sake of privacy and confidentiality, the recipient can set different access rights to any of his addresses for any other user on the system so that even if his name was found on the central database through a publicly available email, the sender will not be able to send him a fax if the fax address was confidential and the sender was not given access rights.

The system could include a further feature whereby a user would be allowed to attempt to send a message to a person via one platform without necessarily knowing the name of the person, but provided that person's address or another platform is known. For example, if a user only had a fax number the user could try to e-mail the recipient by entering eml?651234567 (where 651234567 is the fax number) and the system will search and match a record with fields matching either an SMS, Fax or Phone address and return the e-mail address if one exists, and if the user has been given proper access rights.

This may be better exemplified by reference to Figure 2. If we assume that the user wishes to send an email message having only the intended recipients facsimile number, then the message request 12 may be as follows:

TO: eml?651234567

FROM: david

SUBJECT: Hi

MESSAGE: How are you

On receipt of this message request 12, the system searches the database for any field containing "651234567". In this case, the central database is searched due to the use of the "?" modifier. In some cases, it is possible that the system will locate multiple records matching the search criteria. For example, a company may have a number of employee's on the system all of whom have the same facsimile number. If the system does locate multiple records, then this list of records is returned to the sender to select the appropriate record. Once the appropriate record has been selected by the sender, the system then searches for the appropriate address. In this case, if we assume that the fax number

651234567 matches John's record which was selected by the sender then the system searches for John's email address due to the identifier "eml".

If in searching the database 13, the system locates only a single record, for example "John" was found to have a facsimile 651234567, then the system searches the database for the appropriate address based on the identifier, in this case John's email address.

Once the actual email address has been located 15, the system then replaces the actual address with the original address entered in the "TO" field 16, and forwards the message to the appropriate server. In this case, the message is forwarded to the email server. The system then enables the appropriate server to forward the message 17. Again in this case the email server forwards the email via the Internet.

In this arrangement access rights could be set up on 2 levels. Namely, an access option to view and send to the actual address and another access option to be able to send to the address but not view. This allows some level of privacy as the actual address is not known by the sender. If the recipient later decides he does not want messages from a particular sender, he can remove the "send" access and the sender has no way of finding alternative means to message the recipient since he does not have the actual address.

To use the present addressing system, a user will need to use an appropriate multi-platform messaging system or a single platform messaging system integrated with the Unified Addressing System.

To specify a particular recipient's address on any platform, a sender first types in the platform identifier, (eg eml for Email, sms for short text messaging, fax for facsimile and so on) followed by the appropriate database modifier to indicate to the system which database he wishes to use to extract the address (eg "?" for central database and "!" for personal address book) and finally the recipient's name that is kept in the personal address book or central database as the case may be. The sender then proceeds to compose a message as he normally would on that particular platform or device and send the message upon completion.

It will be understood that the identifier need not be a "?" or "!", but rather any symbol could be used. The only requirement is that the identifier be capable of separating the addressee's name from the platform identifier. If one system is such that the user is allowed to maintain a personal address book, then the identifier also
5 needs to be able to indicate which address book is to be consulted, the personal address book or the system address book. Alternatively, as mentioned previously an identifier may not be necessary if only one database is used, however, it would still be recommended for ease of reading.

The system could also be implemented such that the personal database will
10 be consulted first, and if no match is found for the addressee name, the system will then consult the system address book. In a further implementation, the system may be adapted to accept either an addressee's name or their actual address. In this arrangement the system could analyse the address, to thereby register whether an actual address has been inputted or, alternatively, a different modifier could be used.
15 In this scenario a modifier could be used to force the system to use a particular address. This could be advantageous when it is known that the user is temporarily at a different address.

The message is then sent from the appropriate device via whatever protocols that are employed by the device (eg WAP on WAP phones, HTTP on personal
20 computers or other internet devices, etc.) through an internet connection (wireline or wireless) to the server on which the subject system is implemented. The present system is deployed as a software engine on the system server which processes the information received from the user and accesses the relevant database on the database server that contains the names and their various platform addresses as
25 well as access level settings.

For example, upon receiving a request to send out a message from a user, the system splits the addressee field (usually the "TO:" field in a messaging platform) into a list of each platform address types. The system works out what type of address it is from the unique platform identifier for instance eml for email, sms for
30 SMS, fax for Fax, and so on. Conveniently, the platform identifier will be 3 characters long, although an alternative coding system could equally be adopted

once the system has identified the platform to send the message to the system. Then calls the relevant database (personal address book of a user or the central database) based on the database modifier ("!" for personal address book and "?" for central database). When a personal address book is specified, then the system will
5 look up the database (personal address book) set up by the sender that is indicated in the "FROM" field of the message. Once the database has been identified, it is queried by the system for the record belonging to the recipient based on the name specified. It then extracts the actual platform address in the record from the relevant field in the record based on the platform specified in the identifier. The system then
10 checks the database of the recipient to verify that the sender has been given appropriate access rights to usage of that platform address. If the sender does not have proper access rights, then the transaction is aborted and the sender is sent an error message. If the sender has proper access rights then actual platform address is sent to the system which inserts the actual platform address into the "TO" field of
15 the message and sends the message with the actual platform address to the appropriate messaging servers for the message to be sent out. The appropriate messaging server to send the message to is identified by the platform identifier used in the original unified system address. Therefore an address with eml as identifier will be sent to an email server, sms to an sms server, fax to a fax server and so on.

20 Referring now to figure 1, and providing a specific example, a message request 1 is received by the system. This message may for example be:

TO: eml?john fax!john

FROM: david

SUBJECT: Hi

25 MESSAGE: How are you

It is noted in the example, that the user wishes to send an email to John using the record from the central database, and also a fax to John using the record on the users personal database. The system may analyse each of the addresses in the "TO" field in turn. For example, the system will first consider processing "eml?john".

30 In doing so the system invokes a search 2, for a record with the name "john" which is housed on the central database as indicated by the modifier "?".

Once the record "john" has been found on the central database, the system then searches for an address 3 which matches the identifier. In this case, an email address for john is searched for. Once the address, in this case email address, has been located 4, then the actual address is substituted 5 in the "TO" field of the original message and sent to the appropriate server. In this case the email server. The server then sends out the message 6 through the appropriate channels. Again in the present example, the email server sends out the email message via the Internet.

The system may then consider the next entry in the "TO" field from the original message, namely "fax!john". Because of the "!" modifier, the system searches 7 the personal database for records with the name "john". Once the record "john" has been located in the personal address book, the system then searches 8 for the appropriate address. In the present example, the system searches for a facsimile number given the "fax" identifier. Once the appropriate address has been located 9, this address is replaced 10 in the original "TO" field of the message and forwarded to the appropriate server. In the present example, the message is sent to the fax server. The appropriate server then forwards the message through appropriate means 11. Again in the present example, the fax server dials the fax number and sends out the facsimile through PSTN.

As no addresses remain in the "TO" field to be processed, the message has been sent as requested by the user. In the present example, an email and a facsimile have been sent to John from David. The email address was taken from the central database, and the facsimile number from the users personal database.

The solutions to be implemented at the various messaging servers are available in the marketplace and is beyond the scope of this application. As far as the messaging servers are concerned, they will not be able to distinguish if the message received by them have addresses originating from actual addresses typed in by a user or one that was generated by the present system.

It will be understood that the present system or method of unifying and simplifying any messaging platform's addressing system can be extended to all messaging platforms (existing or in the future) using the same method of

implementation as detailed below, so long as a unique platform identifier is assigned to that particular platform.

The method in the preferred embodiment entails the following:

- 5 (1) The system server identifies addresses used under the unified addressing system to belong to a particular messaging platform based on the unique platform identifier assigned to it.
- (2) The system server identifies the appropriate database to search for the actual platform address of the addressee based on the database modifier specified in the unified address format.
- 10 (3) The system server searches the database identified in (2) for a record with name specified in the unified addressing format.
- (4) The system server extracts the actual platform address from the record found in (3) from the field that coincides with the messaging platform identified in (1).
- (5) The system server checks within the record found in (3) for access
15 rights of the sender (extracted from "FROM" field of message) to the said actual platform address. If sender has inappropriate access rights then the transaction is aborted and sender is given an error message.
- (6) If the sender has appropriate access to the actual platform address, then the actual platform address is substituted into the "TO" field of the message and
20 the entire message with the substituted address is sent to the relevant messaging server (email to email server, fax to fax server, etc.).
- (7) The messaging server formats the message into data in the relevant protocol of that messaging platform and uses the appropriate transmission channel and protocol to send the message (emails sent in SMTP over internet while faxes
25 are sent via fax protocol over normal telephones and so on).

Ideally, the preferred embodiment of the present invention will provide:

- (1) A standardised and centralised system of addressing users of various messaging platforms which is more intuitive and easier to remember than presently available systems.
- 30 (2) A method or system of addresses for various messaging platforms that is easier to input on a mobile phone.

(3) A method or system of allowing a user to message another user on any platform if the recipient's address is forgotten by or unknown to the sender or if the sender's personal address book is not available to him. The system will allow for confidentiality of a user's addresses if he chooses to keep them available only to an "allowed" audience but not to the general public.

Ideally, the present invention will provide a system that enables a user to easily obtain, remember and input any user's address on any messaging platform from any communication device, especially on a mobile phone, by simply typing in a short identifier of a particular messaging platform and the username of the addressee, the latter of which will remain unchanged for all platforms. For example a user with username John will have his Email, SMS, Fax and ICQ addresses referred to as eml?John, sms?John, fax?John, icq?John respectively. Identifiers can be created for all existing as well as future messaging platforms. A special character, in this case a "?", acts as a separator for the identifier and username as well as a modifier to allow retrieval of address information from a central database or a user customised address book.

The preferred embodiment provides a system to enable a user to easily obtain any other user's address on any messaging platform, if the user has been given appropriate access by the second user, input it easily (especially a mobile phone) on an appropriate device without first having been required to obtain it, store it and retrieve it.

Ideally, users under the present system will each enter all of their own addresses of the platforms that they can be contacted on into the central database of the system so that other users need not create a separate address book by first having to obtain the addresses and inputting it into their personal address book. This way any user only really needs to enter their own platform addresses and need not create a personal address book to store other users' addresses as other users would have done the same in entering their own particulars into the central database for other users' retrieval. Presumably, the system will be configured such that the user will be allowed to keep certain addresses confidential, but may allow certain authorised people to access and retrieve those confidential addresses.

Conveniently, the system allows the user to simply enter an easy to remember identifier of any messaging platform and the username of the intended recipient and send off the message without needing to know, or at least recall, the actual address of the recipient on that messaging platform which may be difficult to remember and/or difficult to input, especially on a mobile phone. If the recipient's username is found to be difficult to remember by the sender, as in the case where a username is not his real name or a more easily remembered alias, the sender can set up his personal address book to address the recipient based on a name that the sender finds easier to remember, without causing conflicts in the central database.

The system would be able to identify which database to use in retrieving the correct platform address of the recipient by using modifiers to denote whether the sender is referring to the recipient's name on the central database or on the sender's personal address book.

Ideally, the format of the present addressing system should be easy to input in all devices especially the mobile phone.

In entering any platform address of a recipient, the sender is likely to be given the following options:

(1) The sender may enter the platform identifier, the appropriate modifier of the database to be used and the username on the central database or personal address book whichever the case may be.

(2) The sender may select a username and platform address from the sender's personal address book.

(3) Alternatively, the sender may enter the actual platform address in the appropriate format.

Conveniently, the user may access the system via a mobile phone and any other internet-enabled or appropriately-enabled device over WAP or other suitable network.

The present invention is unique in that it enables a user to message another user on any electronic messaging platform without having to remember or even knowing the actual platform address of the recipient. The said system allows the sender to intuitively enter an address under the said system and send a message to

the intended audience just by knowing their username or any one of their actual platform addresses.

There is not presently available a system that enables the above simplified and unified form of addressing across all electronic messaging platforms.

- 5 Whilst the method and system of the present invention has been summarised and explained by illustrative examples, it will be appreciated by those skilled in the art that many widely varying embodiments and applications are within the teaching and scope of the present invention, and that the examples presented herein are by way of illustration only and should not be construed as limiting the scope of this
- 10 invention.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of addressing an electronic message wherein an address of an intended recipient includes:
 - a platform identifier to identify which message platform the electronic message is to be sent to; and
 - a name identifier to identify the name of the recipient.
2. A method as claimed in claim 1, wherein said address is stored on a database.
3. A method as claimed in claim 1 or 2, further including a modifier to separate said platform identifier and said name identifier.
4. A method as claimed in claim 3, wherein said modifier further determines which database is to be searched for the recipient's address.
5. A method as claimed in claim 1 or 2 wherein, said platform identifier is of a predefined length.
6. A method as claimed in any preceding claim, wherein said name identifier includes the recipients name, email address, sms address, phone number, icq number or facsimile number.
7. A method as claimed in any preceding claim, wherein said platform identifier is a string of characters.
8. A method as claimed in the preceding claim 7, wherein said string is 3 characters long.

9. A method as claimed in the preceding claim 8, wherein said string is from the set:
eml, fax, sms, vox, or icq.
10. A method as claimed in any preceding claim, wherein said modifier is a unique symbol or character.
11. A system for sending electronic messages to at least one message platform, said system including an addressing system wherein said addressing system receives and processes recipient addresses, said recipients addresses including:
a platform identifier to identify which message platform the electronic message is to be sent to; and
a name identifier to identify the name of the recipient.
12. A system as claimed in claim 9, wherein said address is stored on a database.
13. A system as claimed in claim 9 or 10, further including a modifier to separate said platform identifier and said name identifier.
14. A system as claimed in claim 11 wherein said modifier further determines which database is to be searched for the recipients address.
15. A system as claimed in claim 11 or 12, wherein said platform identify is of a predefined length.
16. A system as claimed in any one of claims 11 to 15, wherein said name identifier includes the recipients name, email address, sms address, phone number, icq number or facsimile number.
17. A system as claimed in any one of claims 11 to 16, wherein said platform identifier is a string of characters.

18. A system as claimed in claim 17, wherein said string is 3 characters long.
19. A system as claimed in claim 18, wherein said string is from the set:
eml, fax, sms, vox, or icq.
20. A system as claimed in any one of claims 11 to 19, wherein said modifier is a unique character.
21. A system as claimed in any one of claims 11 to 20 further including an input means to enable a person to enter said electronic messages including recipient addresses.
22. A system as claimed in any one of claims 12 to 21, wherein said database includes a system database and a personal database.
23. A system as claimed in claim 22, wherein said personal database is searched prior by the system to said system database.
24. A system as claimed in any one of claims 11 to 23, further including a security means to enable access rights to be assigned.
25. A system as claimed in claim 24, wherein said access rights include:
view addresses and send messages;
send messages; and
view addresses.
26. A system as claimed in any one of claims 11 to 25, wherein recipient addresses may be amended by said recipient, and/or a user.

Fig 1.

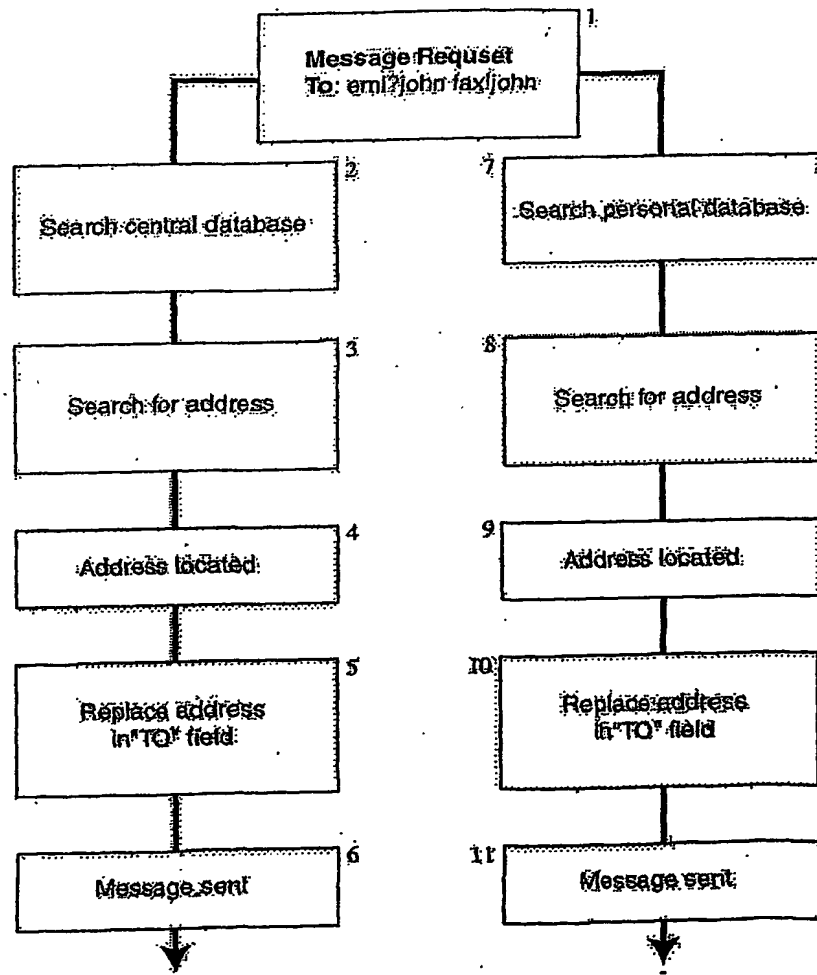
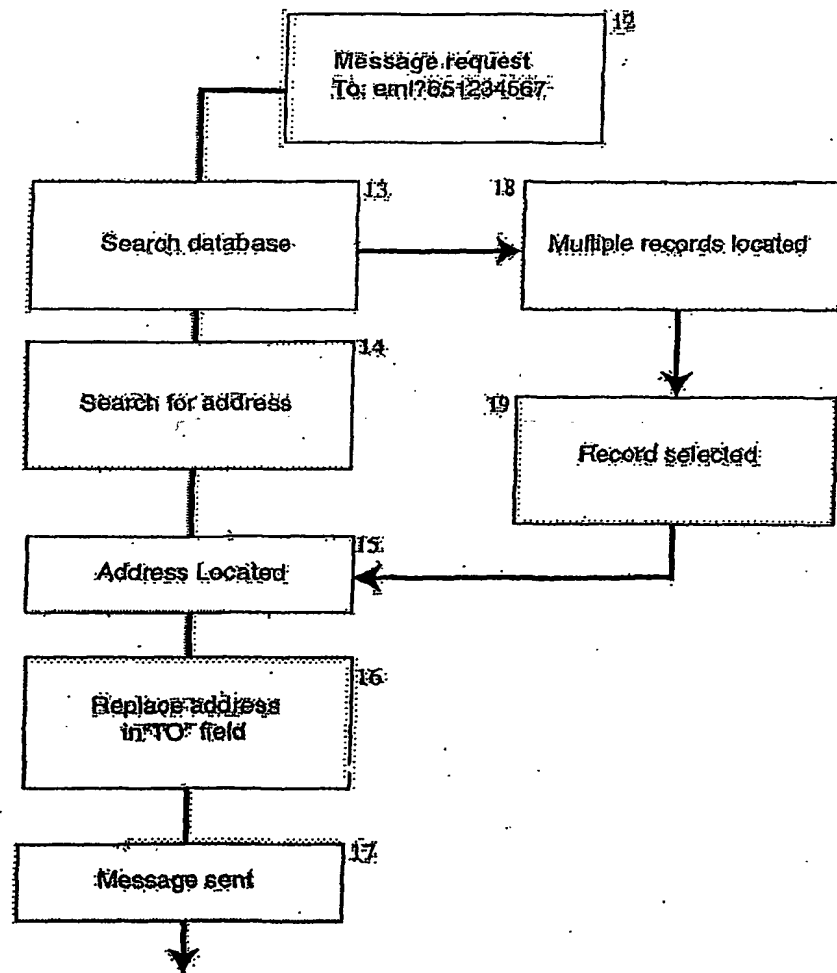


Fig 2.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/SG01/00126

A. CLASSIFICATION OF SUBJECT MATTERInt. Cl. ⁷: H04L 12/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: H04L/--

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPAT: +communicat+, and (address+ or messag+), and (electronic or email or e-mail or fax or facs+ or sms or short message service or +phone) and (platform or media) and identif+, and (name? or recipient? or identif+)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 97/33413 A1 (BRITISH TELECOMMUNICATION PUBLIC LIMITED COMPANY) 12 September 1997 Fig 3, page 1, line 28 - page 2, line 32 page 5, lines 1-29	21, 22, 23, 24 1, 2, 11, 12
X, P Y	WO 00/41366 A1 (VOTICKY, M) 13 July 2000 page 2, line 21 - page 3, line 21 Fig 1, page 4, line 8 - page 5, line 11	4, 7, 10, 14, 17, 20 1, 2, 11, 12

☒ Further documents are listed in the continuation of Box C
 ☒ See patent family annex

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Date of the actual completion of the international search

7 August 2001

Date of mailing of the international search report

9 August 2001

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INTERNATIONAL SEARCH REPORT

International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X .Y	WO 87/07801 A1 (AMERICAN TELEPHONE & TELEGRAPH COMPANY) 17 December 1987 page 4, lines 3-5 abstract, Fig 1, page 1, line 27 - page 2, line 16, page 3, line 27 - page 4, line 3	26 1, 2, 11, 12
A	WO 99/17504 A1 (ERICSSON INC) 8 April 1999 page 2, line 24 - page 3, line 17	11, 21
A	Patent Abstracts of Japan, JP 10-154075 A (NEC CORP) 9 June 1998 abstract	1, 3, 11, 13

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/SG01/00126

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Patent Document Cited in Search Report		Patent Family Member			
WO	97/33413	CA	2247323		
WO	00/41366	AU	23628/00		
WO	87/07801	CA	1261493	CA	1270584
		CN	87103996	EP	270604
		JP	63-503502	CN	1014666B
				JP	25-68602
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				EP	1021897
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